



Promoting Energy Efficient New Homes with ENERGY STAR

Ga-Young Choi

U.S. EPA

Partner Support Coordinator

Jake Titus

ICF International

Account Manager

Learn more at energystar.gov

Agenda



- ENERGY STAR fundamentals
- Program history
- ENERGY STAR and codes
- Policy options
- Resources

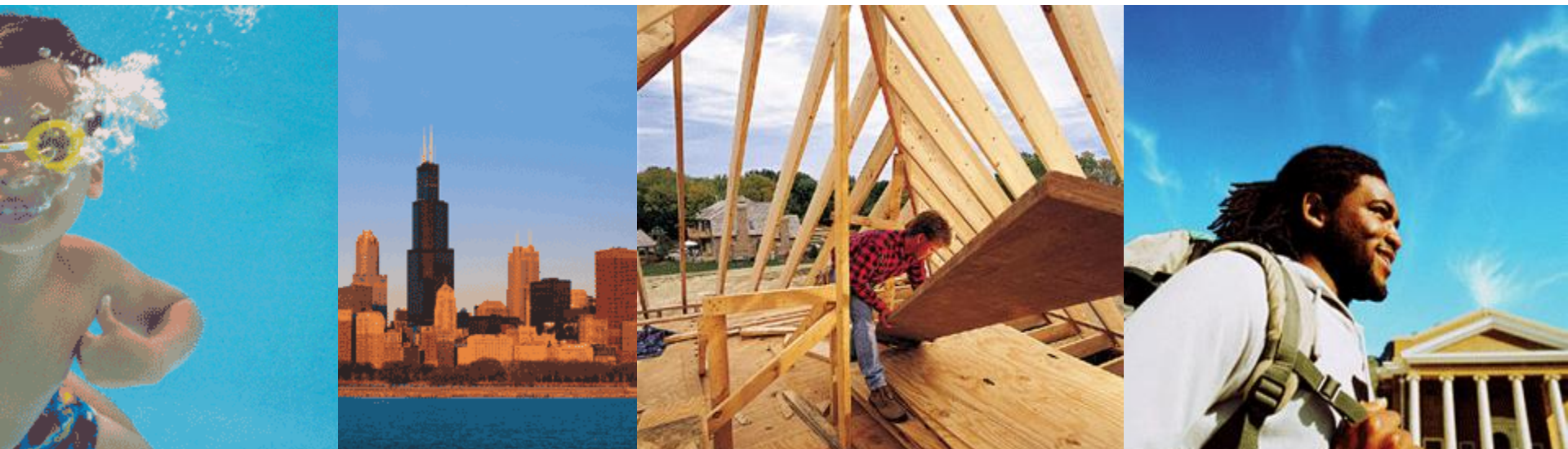


Fundamentals of ENERGY STAR

ENERGY STAR fundamentals



ENERGY STAR is a joint program of the EPA, the DOE and private business partners, helping us all save money and protect the environment through energy efficient products and practices which deliver same or better performance.



ENERGY STAR fundamentals



- What is ENERGY STAR for Homes?
- A voluntary label that:
 - Defines energy efficiency
 - Rigorous specification
 - Third-party verification
 - Recognizes builders
 - Government-backed label
 - Web site, marketing resources, awards

ENERGY STAR fundamentals



- Energy savings
 - Environmental impacts
- Trustworthy performance
- Environmental leadership





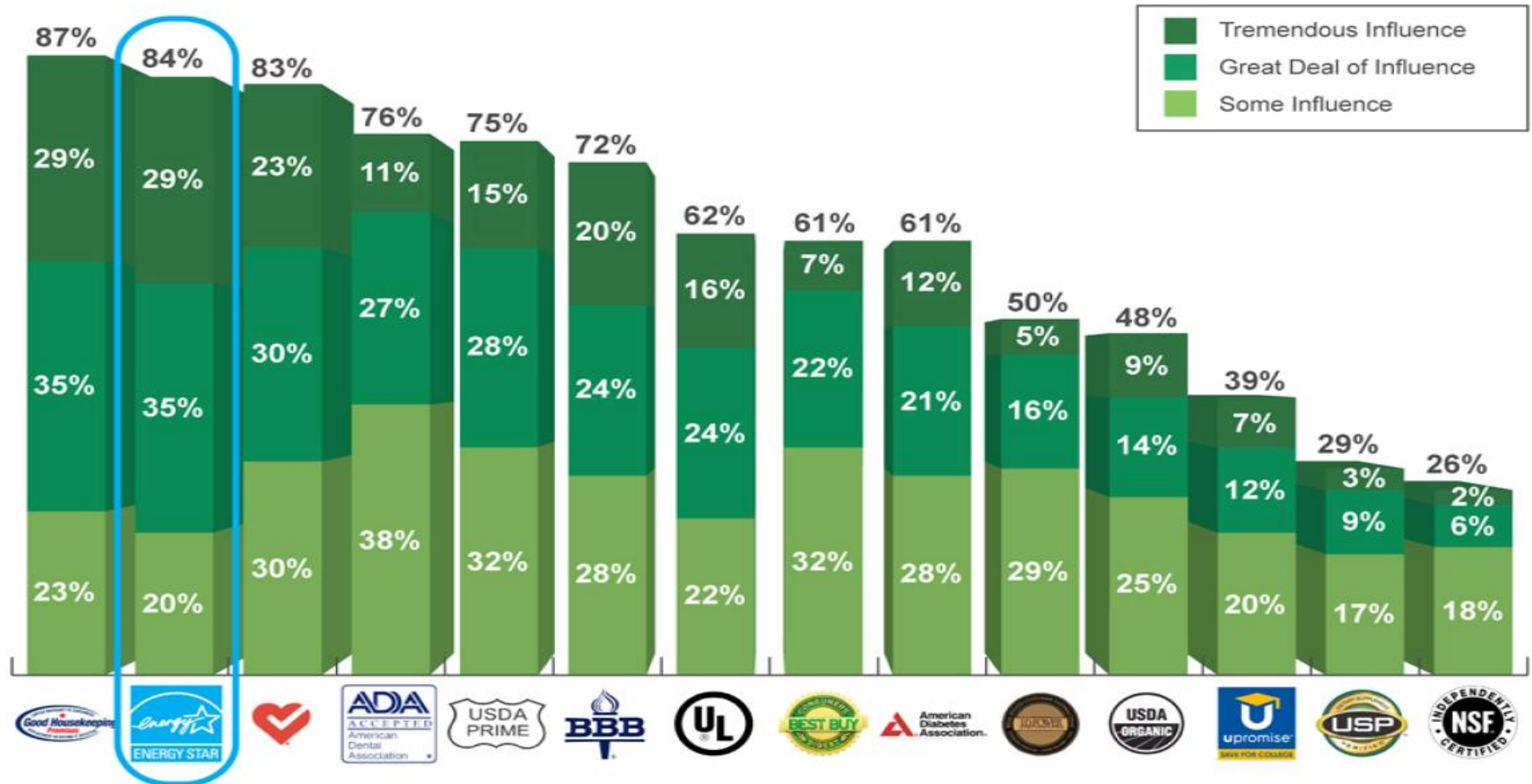
Program history

Program history



- ENERGY STAR
 - Began in 1992 with computers
 - Now 50+ product categories
 - 2008: \$19B saved on utility bills
 - Avoided equivalent GHG emissions from 19B vehicles
 - >75% household brand recognition

Program history



Source: Fairfield Research, Summer 2007

The ENERGY STAR mark ranks among the highest level of influence on product purchase among all consumer emblems, similar in ranking to the *Good Housekeeping Seal*.



Program history



- ENERGY STAR for New Homes
 - Introduced in 1995
 - Windows, shell & duct tightness, efficient HVAC, rater verification

Program history



- 2006
 - Increased model energy codes, momentum for future increases
 - Strong foothold in builders who competently meet current specification
 - Opportunity to raise the bar/need to protect relevance and differentiation
 - Add Thermal Bypass Checklist, right sizing, lighting & appliances

Program history



- 2009
 - Increased model energy codes, movement to zero-energy homes, regular code updates
 - Over 1M labeled homes, 9,900 partners
 - Strong foothold in builders who competently meet current specification
 - Opportunity to raise the bar/need to protect relevance and differentiation
 - Began developing third-generation guidelines

Program history



- 2011 Guidelines (in development)
 - Increase rigor of current measures
 - Additional requirements to improve thermal envelope, HVAC distribution, durability
 - Provide a comprehensive, building science-based specification

Program history



Goal:

**Affordable
Comfortable
Healthy
Durable**

**How:
What:**

**Control
Air Flow**

**Control
Thermal Flow**

**Control
Moisture Flow**

Loads/
QA/QC

Driving
Forces

Fans

Conduction

Convection

Radiation

Vapor

Bulk

Efficient
HVAC

Air Sealing

Air Sealing

Air Sealing

Air Sealing

Efficient
Lighting/App

Tight Ducts

Tight Ducts

Tight Ducts

Efficient
WH

Low-E
Windows

Low-E
Windows

Low-E
Windows

Verification

Air Barriers

Air Barriers

Air Barriers

Air
Barriers

Insulation
Alignment

Insulation
Alignment

Right-Sizing

HVAC
Quality Inst.

Pressure
Balancing

Insulation
Installation

Insulation
Installation

Radiant
Barriers

Pressure
Balancing

Water Man.
Construc.

Hot Water
Distribution

Thermal
Bridging

Ventilation



ENERGY STAR and codes

ENERGY STAR and codes



- Codes are minimums
 - Worst home allowed by law
 - Designates a uniform baseline
- ENERGY STAR is above-code
 - Defines and recognizes above-code efforts
 - No differentiation → no meaning
 - Intentionally enhanced to avoid saturation
 - Facilitate efficient adoption of advanced technology – by rewarding adopters

ENERGY STAR and codes



- Codes are mandatory
 - Developed consultatively with high degree of stakeholder input
 - Lengthy, rigid development process
- ENERGY STAR is voluntary
 - Flexible development process
 - Rapidly respond to opportunities and challenges
 - Designed to raise the bar
 - Requires allowing an opt-out

ENERGY STAR and codes



- Experience with mandates
 - Long Island, NY
 - Extremely concerned about ability to comply with 2011 guidelines
 - Frisco, TX
 - Strong pre-existing demand and market capacity
 - Montgomery County, MD
 - Delayed, may be rescinded

ENERGY STAR and codes



- Ways of promoting EE home construction
 - Voluntary market transformation program
 - Regularly enhanced codes
 - Gradually enhanced code baseline + reward for leading-edge voluntary adopters

Policy options

Policy options: permits & inspections



1. Discount or delay permit fees
 - Revenue neutrality
2. Increase density allowances
 - Increased revenue/area for builder, county
3. Expedited plan approval/priority field inspections
 - Homes planned to be qualified go to front of queue

Policy options: work with partners



4. Discount utility hook-up fees
5. Discount utility bills
6. Discount mortgage interest rates
7. Discount insurance rates

Policy options: marketing and technical support



8. Support training for HERS industry, builders, trades, code officials
9. Educate consumers and recognize builders
 - Include content on community web site
 - Sponsor ads or generate earned media
 - Sponsor sessions at home shows
 - Sponsor parade of ENERGY STAR qualified homes

Resources

Resources



- ENERGY STAR technical resources
 - Online guidelines, clarifications and updates
 - Thermal Bypass Checklist Guide
 - Training resources
 - Self-guided presentations
 - Live training templates



Resources



- ENERGY STAR marketing resources
 - Ready-made collateral
 - Brochures, flyers, fact sheets
 - Design tools
 - ENERGY STAR logos
 - Marketing Toolkit
 - Training resources
 - Self-guided presentations
 - Live training templates
 - Online webinars



Resources



- Building Codes Assistance Project
 - bcap-energy.org)



The screenshot shows the homepage of the Building Codes Assistance Project (BCAP) website. The header features a blue navigation bar with a logo on the left and links for "About Us" and "Contact" on the right. The main content area has a large title "Building Codes Assistance Project" in orange. Below the title, there is a section titled "Strengthen Your Code" with the text "More Coming Soon!". Two main tools are highlighted: "Policy Action Tool" and "Code Builder", both described as providing information on existing laws and advanced codes. A sidebar on the left contains a list of navigation links.

Building Codes Assistance Project

Home

- Home
- Code News
- Code Status and Maps
- Learn About Codes
- Strengthen Your Code
 - Policy Action Tool
 - Code Builder
 - Initiative

Strengthen Your Code

More Coming Soon!

Policy Action Tool -- Provides samples of existing laws from states and cities around the country.

Code Builder -- Provides information on advanced codes explaining terminology, referencing current practice of specific measures, and providing information on applicability.



Questions?



Ga-Young Choi

U.S. EPA

Partner Support Coordinator

Choi.ga-young@epa.gov

202.343.9407

Jake Titus

ICF International

Account Manager

jtitus@icfi.com

703.218.2706

Partner Web site

www.energystar.gov/homes

ENERGY STAR Homes Questions

energystarhomes@energystar.gov

General ENERGY STAR Questions

hotline@energystar.gov